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ABSTRACT OF THE DISCLOSURE

A gamma ray imaging system generates and displays an image signal which is representative of an image of a gamma ray emitting source. The imaging system is particularly well suited for use in all phases of the nuclear power industry, as well as in the field of nuclear medicine. The preferred embodiment of the gamma ray imaging system basically includes a coded mask for receiving radiation emitted by a source and generating a coded shadow therefrom, a position sensitive detector situated with respect to the coded mask to allow the coded shadow to impinge on the detector, the detector generating a coded optical signal in response thereto, an array of charge coupled devices being responsive to the coded optical signal and generating a coded electrical signal in response thereto and a signal processor being responsive to the coded electrical signal and decoding the coded electrical signal to generate an image signal which is representative of an image of gamma ray emitting source.